

Appln. No. 09/864,107

Amdt. dated January 18, 2006

Reply to Office Action dated November 1, 2005

R E M A R K S / A R G U M E N T S

Reconsideration of the present application, as amended, is respectfully requested.

The November 1, 2005 Office Action and the Examiner's comments have been carefully considered. In response, claims 1, 9-12 and 14-18 are amended, claims 25-33 are added, and remarks are set forth below in a sincere effort to place the present application in form for allowance. The amendments are supported by the application as originally filed. Therefore, no new matter is added.

PRIOR ART REJECTIONS

In the Office Action claims 1-3, 5-12 and 14-19 are rejected under 35 USC 103 as being unpatentable over USP 5,740,267 (Echerer) in view of USP 6,461,298 (Fenster et al.) and USP 5,798,752 (Buxton et al.).

In response, independent claims 1 and 10 are amended to clarify the invention.

The general subject matter of claims 1 and 10 is extensively described in prior Amendments. Claim 1 as amended herein includes the features of, inter alia, displaying, essentially unobstructed, a medical image in a substantial portion of a graphical interface without the presence of menus, toolbars and control panels on the graphical interface and, when the medical

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image is displayed on the graphical interface without the presence of menus, toolbars and control panels, enabling the generation of at least three different measurement graphics based only upon actuation of at least one mouse button when a pointer symbol representing a current position of the mouse on the graphical interface is situated on the medical image such that the measurement graphics are generated without movement of the pointer symbol outside of the medical image, and enabling the generation of the at least three measurement graphics without requiring a user to define in advance the type of measurement graphic.

Claim 10 as amended includes the features of, inter alia, a menu-less graphical interface arranged to display, essentially unobstructed, a medical image in a substantial portion of a graphical interface without the presence of menus, toolbars and control panels on the graphical interface, a processor-internal list of measurement operations producing at least three corresponding, different measurement graphics on the medical image, and a processor which produces, when the medical image is displayed on the graphical interface without the presence of menus, toolbars and control panels, the at least three different measurement graphics based on the list of measurement operations only upon actuation of at least one pointing device button device when a pointer symbol representing the pointing device is situated on the medical image such that the measurement graphics

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are produced without movement of the pointer symbol outside of the medical image.

A feature of the present invention is that it is possible to generate at least three, and in a preferred embodiment five, different measurement graphics for a medical image by actuating only a mouse button while a pointer symbol representing the position of the mouse is situated on the medical image. These five measurement graphics are listed in the specification at page 5, lines 28-32. The type of graphic being created is determined from the number and/or topology of the points entered during mouse manipulation (see the specification at page 4, lines 7-9). Thus, the user is not required to select in advance which of the measurement graphics is to be generated and is not required to move the pointer symbol outside of the medical image to obtain the measurement graphic (see the specification at page 5, lines 23-32 and subsequent detailed discussion of the formation of the different graphics using only the mouse with reference to Figs. 3-9).

Since the measurement graphics are not required to be selected in advance, i.e., it is not necessary to click on a user interface construct such as a toolbar to enable a measurement function or selection of the particular measurement graphic to be applied, a medical image can be displayed, essentially unobstructed, in a substantial portion of a graphical interface without the presence of menus, toolbars and control panels on the

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graphical interface. As shown in Fig. 2, the medical image occupies substantially the entire image field except for sensitive areas showing data about the image. There are no user interface constructs, i.e., menus, toolbars or control panels on the graphical interface.

In consideration of the foregoing, the Examiner's rejection is respectfully traversed on the grounds that Echerer et al., Fenster and Buxton et al. do not disclose, teach or suggest, inter alia, displaying a medical image without menus, toolbars and control panels and enabling the generation of at least three measurement graphics without movement of a pointer symbol associated with a mouse outside of the medical image as set forth in claim 1.

Echerer et al. disclose a menu selection including a Manual Analysis menu wherein it is necessary to select specific buttons on the menu in order to generate different measurement graphics. Echerer et al. thus requires activation of a menu toolbar and selection of one of a plurality of different listed measurement graphics thereon in order to generate that graphic. Movement of the pointer symbol of a mouse is therefore required in order to obtain measurement graphics.

Fenster discloses an ultrasound imaging system which allows a user to measure distances and areas of images by clicking two or three times on a graphical user input device 38 when a pointer

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symbol representing the position of the input device 38 is situated on the image.

In contrast to the present claimed invention, Fenster does not disclose, teach or suggest displaying a medical image without menus, toolbars and control panels but rather clearly shows the presence of a menu, toolbar or control panel while the image is being displayed (see Fig. 14).

Moreover, Fenster also does not disclose, teach or suggest generating three different measurement graphics, such as distance, angle and area, based on actuations of a mouse button without movement of a pointer symbol of a mouse outside of the medical image. Rather, Fenster discloses only two measurement graphics, distance and area.

Buxton et al. describes a data processor which enables processing tools. Buxton et al. does not disclose displaying a medical image on a graphical interface without menus, toolbars and control panels and enabling at least three measurement graphics to be generated based on actuations of a mouse button without movement of a pointer symbol of a mouse outside of the medical image.

In view of the foregoing, claim 1 is patentable over Echerer et al., Fenster and Buxton et al. when either alone under 35 USC 102 or taken in combination under 35 U.S.C. 103.

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The other references of record do not close the gap between the present claimed invention as defined by claim 1 and Echerer et al. in view of Fenster and Buxton et al.

Therefore, claim 1 and claims 2, 3, 5-9 and 19 which are either directly or indirectly dependent on claim 1 are patentable over all of the references of record under 35 U.S.C. §103.

Claim 10 is an apparatus claim which substantially corresponds to claim 1. Claim 10 is patentable over the cited references for reasons, *inter alia*, set forth above in connection with claim 1. As discussed above, Echerer et al., Fenster and Buxton et al. do not disclose, teach or suggest displaying a medical image without menus, toolbars and control panels and enabling the generation of at least three measurement graphics without movement of a pointer symbol outside of the medical image.

Claims 11, 12 and 14-18 which are either directly or indirectly dependent on claim 10 are patentable over the cited references in view of their dependence on claim 10 and because the references of record do not disclose, teach or suggest each of the limitations set forth in claims 11, 12 and 14-18.

#### NEW CLAIMS

Claims 25-33 are added. In view of the previous cancellation of claims 3, 13 and 20-24 and amendment of claims 9 and 18 to

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remove multiple dependencies, no fee is due for the presentation of claims 25-33.

Claims 25 and 31 are directed to embodiments wherein one of the measurement graphics is an angle value quantity, which feature was previously set forth in claims 1 and 10.

Claims 26 and 32 are directed to embodiments wherein the measurement graphics include a distance, area and angle measurement.

Claims 27 and 33 are directed to embodiments wherein generation of the at least three measurement graphics is enabled immediately after the medical image is displayed on the graphical interface without intervening actuation of the at least one button of the mouse or pointing device when the pointer symbol is situated on menus, toolbars and control panels. As described in the specification, e.g., at page 4, lines 3-10, only one interaction can create all measurement graphics, this interaction being use of a mouse, which precludes use of a menu, toolbar or control panel between the appearance of the image on the graphical interface and the generation of the measurement graphic.

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Claims 28-30 are directed to embodiments wherein the determination of which three measurement graphics is generated is based on the number and/or topology of points selected upon actuation of the at least one button of the mouse. This feature is described in the specification at page 4, lines 7-9, inter alia.

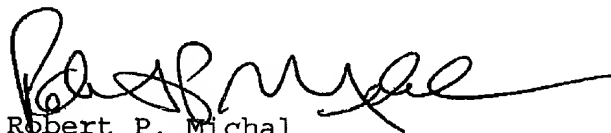
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Entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

If the Examiner disagrees with any of the foregoing, the Examiner is respectfully requested to point out where there is support for a contrary view.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,

  
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